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MARKETING COSTS, FARM PRICES, AND THE FARMER'S SHARE

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Marketing of farm products is a big business.[1] It is getting bigger year by year—in number of workers, in capital investment, and in dollar volume of business. The gross returns of agencies marketing farm products exceed the gross returns of the farmer-producers.[2] Furthermore, since the end of World War II the gross returns of marketing agencies have increased relative to farmers' gross returns in almost every year. Or, stated in another manner, the farmer's share of consumer expenditures for food, clothing, and other consumer goods derived from farm raw materials has declined.

For most consumer goods derived from agricultural products, the returns to marketing agencies are a larger part of the retail price then are the farmer's returns, particularly for those farm products that are used as raw materials in manufacturing or processing. The farm price is such a small proportion of the retail price of some products that if the farmer gave his products away, retail prices would be reduced by less than 20 percent. For example, if the farm value of the 0.9 pound of wheat in a loaf of bread were subtracted, the price of white bread would be reduced from 19 cents to 16.5. Similarly, the price of a 12-ounce package of corn flakes would drop from 23 cents to 20 cents, a 23.5-cent package of cigarettes to 20 cents, and a man's cotton dress shirt from $3.60 to $3.30. Likewise, farm prices of wheat, corn, cotton, and tobacco could increase by 50 percent with increases of not over 10 percent in the retail price of these consumer goods.[3] It is perhaps significant that most of the products derived from the so-called basic farm commodities—wheat, cotton, corn, tobacco, rice, and peanuts—fall in the group discussed in this

[1] In this paper I use marketing of farm products in its broadest sense—to include all of the operations involved from the sale of the products by the farmer until purchased by the consumer in the form, time, and place desired. This is the definition generally used by State experiment stations and the U. S. Department of Agriculture, but it does not always agree wtih definitions of marketing used by nonagricultural workers. It is quite logical that agricultural workers should use this broad definition as farmers are interested in all of the opeations from the farm to the consumer that may affect farmers' returns.

[2] As used here, gross returns of agencies marketing farm products are equal to consumer expenditures for goods derived from farm products less payments to farmers for the agricultural raw materials.

[3] These comparisons assume, of course, that the size of the farm-retail spread (or gross marketing margin) would not be affected by these assumed changes in farm prices. Price comparisons are based on United States average retail prices published by the Bureau of Labor Statistics and United States average prices received by farmers published by the Agricultural Marketing Service.

paragraph; that is, products for which large percentage changes in farm prices would have relatively little effect on retail price.

With the large role that the marketing system has in getting products from the farmer to the consumer, it is not surprising that both farmers and consumers have a continuing keen interest in the amount and changes in marketing margins and the efficiency of the marketing system. This interest is usually intensified when farm prices are falling and/or retail prices are rising. Neither is it surprising that this subcommittee in its "exploration of the causes of the farm problem and the implications of alternative means of dealing with it" should wish to consider various aspects of "marketing costs and structure and marketing agreements and orders."

My assignment for the discussion on marketing was to prepare a paper that would help provide perspective as to the meaning of marketing margins and their significance for farm prices and income. In part, my paper will be introductory to topics that will be discussed in more detail by other participants. I will make particular reference to the following questions noted by the subcommittee:

1. Relation of marketing costs to level and stability of farm prices.
2. To what extent the farmer's share of the consumer's dollar is a criterion of marketing efficiency.

The Farmer's Share as a Measure of Marketing Efficiency

The farmer's share varies widely by product and over time. For example, the farmer's share of the retail price is always much larger for eggs than for a product like bread. But this is not because marketing agencies handling eggs are more efficient or make less profit than those handling wheat, flour, and bread. The principal reason for the differences is in the operations performed by farmers and marketing agencies and the differences in resources required to perform these operations. Egg production involes more operations on the farm than does the production of wheat—not only the production of grain as in wheat, but raising the laying hen and then feeding the hen. For wheat, a two-stage manufacturing process is involved after sale by farmers. The wheat is milled into flour and then the flour is combined with other ingredients in the baking of the bread, in addition to the buying and selling, transporting, and storage of wheat, flour, and bread.

By grouping food products into four classes—unprocessed animal products, processed animal products, unprocessed crops, and processed crops—the relationship of the farmer's share to the relative amounts of production processes on the farm and after farm sale can be shown. Eggs are classified as an unprocessed animal product and bread as a processed crop. In general, farmers receive the largest share of the consumer's dollar for unprocessed animal products and the smallest for processed crops although there is considerable variation within each of the groups (table 1). The degree of processing varies. Also, distance to market, relative perishability, and other factors affect the ranking of the farmer's share within groups.

TABLE 1.—*Variations in farmer's shares by type of food products, average 1952–56*

Type of product	*Farmer's share (percent)*
Unprocessed foods, animal products[1]:	
Eggs	69
Beef, choice grade	65
Chickens, frying	60
Lamb	59
Pork (retail cuts)	58
Average	62
Unprocessed foods, crops:	
Beans, dried	46
Apples	43
Potatoes	39
Lettuce	38
Onions	36
Tomatoes	36
Prunes	35
Oranges	30
Lemons	29
Grapefruit	18
Average	35
Processed foods, animal products[1]:	
Butter	71
Cheese, American process	52
Milk, fluid	47
Milk, evaporated	46
Lard[2]	44
Ice cream	19
Average	46
Processed foods, crops:	
Peanut butter[3]	40
Vegetable shortening	37
Margarine	31
Salad dressing	23
Flour, white	39
Corn meal	27
Rolled oats	26
Bread, white	19
Crackers, soda[3]	15
Corn flakes	15
Corn sirup[3]	15
Orange juice concentrate, frozen	31
Strawberries, frozen	26
Beans, green, frozen[3]	20
Peaches, canned	18
Tomatoes, canned	17
Peas, frozen	16
Sugar, beet	46
Average	26

[1] Some processing is involved for almost all animal products. However, the kinds and grades of meat listed here are sold mostly in fresh form in contrast to canned and processed products derived mostly from other kinds and grades of meat.

[2] Rough estimates, based on value of live hog imputed to lard in calculating byproduct value for pork.

[3] 4-year average, 1953–56.

The farmer's share of the consumer's dollar as an average for all products and for individual products varies markedly over time. The average farmer's share for a market basket of food products increased from 40 percent in 1940 to 53 percent in 1945, and declined to 40 percent again by 1956. These changes were related primarily to changing relationships of agricultural and nonagricultural prices, not to changes in marketing efficiency. When farm and retail prices fall because of an increase in marketings, the farmer's share often declines because prices go down proportionately more at the farm level, not because marketing agencies become less efficient.

As noted, the farmer's share data show variations in the amounts going to farmers by types of food products. These differences reflect, on the average, the variations in the balance of resources used in the farm production of a product and those used in processing and distributing after farm sale. The share the farmer receives of the retail price of a product indicates how much of an effect a change in the farm price is likely to have on the retail price. Over time, the farmer's share rata reflect changes taking place in the marketing system as well as changes in relationships between agricultural and nonagricultural prices. The farmer's share is not, however, a useful measure for studying changes in marketing efficiency either in the short or long run. Changes in marketing efficiency can affect the trend and/or level of the farmer's share but other factors generally have more influence. A measure of marketing efficiency would compare services performed with costs or charges, or it would measure services actually delivered with potential services obtainable from the resources used. The farmer's share does not do this. Also, it should be noted that the farmer's share is a percentage measurement that depends on the ratio of marketing charges and farm prices. It is based on gross returns to farmers and marketing agencies and does not reflect net returns of either group.

Influence of Marketing Costs on Level and Stability of Farm Prices

In a broad sense, marketing contributes both to a higher level and greater stability of farm prices. Specialization in production by commercial farmers would be impossible without the marketing system to bridge the gap between the farmer and the city consumer. It bridges the gap in several ways—in distance, in time, and in form. Because of the vast network of transportation and distribution facilities, today's market for most farm products is nationwide. Through the marketing system, products of the individual commercial farmer can reach almost any household in the United States. This reduces regional differences in prices resulting from local surpluses or deficits. The price variability resulting from seasonal and cyclical fluctuations in farm production and marketings is reduced by storage, refrigeration, and processing facilities that help provide a more even flow of products to consumers.

Processing has widened the market for many food products by making them available in more forms, in all seasons of the year, and to

consumers all over the country.[4] This is particularly important for the more perishable farm products for which harvesting and marketing are concentrated during a few weeks or months of each year. In general, the more different uses found for each farm product, the more stable its prices should be at the farm level, particularly within a marketing season. An oversupply for fresh use can be diverted to processed uses.

A look at the shelves of today's supermarkets quickly shows the wide variety of processed and packaged forms in which food is available to the shopper. Supermarkets carrying 5,000 or more different items are not at all uncommon. "Oldtimers" sometimes talk nostalgically about the cracker-barrel days when there was less standardization and packaging of foods. While today's supermarkets sometimes may limit the customer's choice of buying or not buying marketing services in the form of added processing or packaging, it seems certain that more rather than less variety and choice are available to today's food shoppers.

The development of our modern marketing system also has made the farmer more dependent on the marketing system in several respects. Marketing agencies buy farm products; few farmers sell direct to consumers. However, the real market for farm products comes not from the first buyers of farm produce but from consumers. Regardless of fluctuations in farm output, the marketing system must be geared largely to consumers. The volume of food handled for sale to consumers depends on the number of consumers and their food requirements. The demand for farm products at the farm level is a "derived" demand. The marketing system is the mechanism through which the consumer demand for finished products is transmitted back to the farmer as demand for his raw materials. The efficiency of the marketing system can be evaluated in part on how well signals of changes in consumer demand are transmitted back to the farmer.

Marketing and marketing costs may tend to make prices more variable as well as less variable. The costs that make up margins are generally "sticky." They do not respond to changes in supply of farm products in the same way that prices do. Margins per unit are likely to be as high (or in some cases higher) for a large volume marketed as for a small volume. This leads us to the familiar proposition discussed in most agricultural marketing textbooks that demand for farm products is less elastic at the farm level than at retail. That is, with a given change in supply, farm prices will change relatively more than retail prices unless the margin changes in the same propor-

[4] Many examples of foods sold in an increasing number of forms may be cited. One of the more interesting is the "common" Irish potato. Some of its many processed forms are potato chips, frozen french fries, canned potatoes, potato salad, instant mashed potatoes (dehydrated in packages), as well as the potatoes used in soups, TV dinners, and many other ready-prepared foods. The proportion of the potato crop used in processed form has risen steadily in recent years, increasing from an estimated 11 percent in 1952 to 22 percent in 1956.

tion. (Because of "sticky" costs, margins do not often behave in this way.) For example, if the farmer's share is 50 percent of the retail price, the percentage change in the farm price will be twice as large as the change in the retail price and if the farmer's share is 25 percent, four times as large, assuming that the spread between farm and retail prices does not change. Thus, the smaller the farmer's share, the greater the price changes at the farm level percentagewise. Any general trend toward marketing costs making up a larger part of retail prices would tend to make farm prices less stable (that is, the derived demand at the farm level less elastic).

How do changes in marketing costs affect farm prices? Because the farm price often is, in an elementary sense, what is left after marketing agencies have deducted their charges, changes in marketing costs are likely to affect farm prices. Basically, marketing costs may change for two reasons: (1) A change in the services performed by the marketing system and (2) a change in the costs of performing the same services. The effects on farm prices are likely to differ, depending on the reason for the change in marketing costs.

First, let us consider the impact of added services. Assume further that the additional marketing services increase costs and that they replace services previously performed by housewives. If the added services increase the demand for the product so that consumers buy as much as formerly at a price which covers the extra cost, the farm price should not change.

Housewives generally seem to be willing to pay for the costs of additional services. But processing and other added services do not necessarily add cost. Transportation of a product may be less costly in processed form than in the fresh form. This is true for canned or frozen concentrated juices. In such cases both consumers and farmers may benefit from the added processing.

Several other variations of changes in marketing services can be postulated. Marketing agencies may take over jobs formerly done by farmers in marketing their products. In this instance prices received by farmers would drop. Or services performed by the marketing system may decrease, which should lower prices at retail or increase prices at the farm.

Farm prices are more likely to be affected if marketing costs change because of changes in costs of performing the same services. To determine how they are affected can be likened to unraveling the incidence of a tax. If the full extent of the marketing-cost increase is passed on to the consumer in the form of higher retail prices, consumers will buy less. How much less will depend on the elasticity of demand; that is, how willing the consumers are to substitute other goods. With a decline in consumer purchases, prices will have to drop to move the same amount of goods, which means lower farm prices. Lower farm prices may mean that farmers will cut back their production

although this may take from a few months to several years. Thus, the effect of higher marketing costs will fall partly on the consumer and partly on the farmer. But, if the consumer is more responsive to changes in prices than the farmer, which is likely to be true at least in the short run, more of the effect of the higher costs will be borne by the farmer.

Whether cost increases are initially passed on to the consumer, deducted from the farm price, or absorbed by the marketing firm may depend on the market, or bargaining, position of the marketing firm; that is, the elasticity of demand and supply of the firm.

For example, if a processing firm is the principal buyer of a farm product in a particular market, cost increases are more likely to be reflected in a lower farm price, especially if the firm is selling its product in a competitive market. But, if a processor (or processing industry) is buying a farm product in a market competitive with many other buyers and its purchases are a small part of the total market, then this processor is more likely to either absorb a cost increase or raise its selling price. If the cost increase is general throughout this industry, it probably will be passed on. The individual firm may be selling a branded product for which it has a special demand; in this instance, it may raise its selling price. Sometimes a firm may increase both its costs and revenue by spending more money in advertising or other promotion and expand its market. These are only a few of the factors that may need to be considered in analyzing the effect of an increase in marketing costs.

Changes in some costs—for example, transportation—may affect some farmers more than others because of a differential effect. Prices of producers distant from the consuming market are likely to be lowered more by general increases in transportation rates than nearby producers and raised more by decreases in transportation rates. Likewise, local or regional variations in other cost factors also may affect the competitive position and returns of producing areas differently.

General increases in marketing costs, which are much more common than decreases, do not necessarily lead to lower farm prices. Costs of marketing farm products may increase because of general increases in wage rates that are part of a general rise in wage rates throughout the economy. Labor payments make up 70 percent or more of total national income, so that a general increase in wages may raise consumer demand for food enough to offset the effect of higher costs on farm prices.

Variability of Farm and Retail Prices and Farm-Retail Spreads

In general, agricultural prices are more variable than nonagricultural prices. During periods of inflation and deflation, farm product prices are often the first to move and may move farther than other prices. Also, farm product prices tend to be more variable at farm than at retail because of the relative inflexibility of farm-retail spreads. Changes in farm-retail spreads are for the most part independent of the supply and demand factors affecting farm and retail prices. Changes in spreads over a period of time are determined primarily by changes in costs of all factors employed in processing and distributing operations.[5] Long-time trends in these spreads tend to parallel trends in costs and prices in the nonagricultural section of the economy.

A study of price changes for farm food products during the period 1947–56 illustrates the greater variability of prices at the farm level. In 6 years of this period the average prices received by farmers for food products changed by 5 percent or more from the preceding year. In only 3 years did average retail prices of farm food products change by as much as 5 percent. The change in the farm-retail spread was less than 5 percent in all but 2 years of this period. A similar pattern held for individual food products (table 2). In general, yearly changes in retail prices exceeded those in the farm-retail spreads but this was not true of all products. But spreads were more variable than retail prices for beef, pork, and lamb, most items in the bakery and cereal products group, and several processed fruits and vegetables.

While farm-retail spreads are generally less flexible than farm and retail prices for long-term comparisons, they often are more flexible on a short-term basis. Monthly changes in farm-retail spreads may sometimes show little correspondence to changes in costs. The average monthly change in farm-retail spreads during 1947–56 exceeded the average change in retail prices of most food products given in table 3. For the meat items and several other products, spreads were more variable on a monthly basis than prices received by farmers (farm value).

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[5] Profits of marketing agencies also are a part of the total farm-retail spread but they generally make up a relatively small part of the total.

TABLE 2.—*Relative frequency of year-to-year changes in retail and farm prices, and farm-retail spreads, selected food products, 1947–56*

Item [1]	Year-to-year percentage change			
	Less than 5.0	5.0–14.9	15.0–24.9	25.0 or more
Market basket:				
Retail price	67	33	0	0
Farm value [2]	33	56	11	0
Farm-retail spread	78	22	0	0
Meat products (3):				
Retail price	55	30	15	0
Farm value [2]	33	37	22	8
Farm-retail spread	41	48	4	7
Dairy products (5):				
Retail price	69	28	3	0
Farm value [2]	44	44	10	2
Farm-retail spread	72	26	2	0
Poultry and eggs (2):				
Retail price	54	33	13	0
Farm value [2]	27	46	20	7
Farm-retail spread	60	40	0	0
Bakery and cereal products (6):				
Retail price	77	17	6	0
Farm value [2]	42	42	6	10
Farm-retail spread	61	33	2	4
Fresh fruits and vegetables (13):				
Retail price	37	39	15	9
Farm value [2]	18	36	18	28
Farm-retail spread	47	41	8	4
Processed fruits and vegetables (12):				
Retail price	60	32	5	3
Farm value [2]	46	31	9	14
Farm-retail spread	62	29	6	3
Fats and oils (4):				
Retail price	62	27	11	0
Farm value [2]	23	39	15	23
Farm-retail spread	58	38	4	0

[1] Data for market basket are based on average price changes for all items in market basket. Data for product groups are based on data for individual products in groups. The numbers in parentheses indicate the number of items included in each group.

[2] Average price received by farmers for quantity of farm product equivalent to retail unit (adjusted for value of nonfood byproducts).

TABLE 3.—*Average monthly changes, in percent, in retail price, farm value, and farm-retail spread, selected food products, 1947–56*

Item	Retail price	Farm value [1]	Farm-retail spread
Beef (Choice grade)	2.2	3.5	5.4
Pork (excluding lard)	3.2	6.6	7.1
Lamb	3.5	3.8	3.9
Butter	2.1	2.3	3.4
Cheese, American process	.6	1.6	1.7
Evaporated milk	.8	2.1	2.1
Fluid milk	1.1	1.8	1.0
Ice cream [2]	.2	1.4	.5
Chickens, frying [3]	2.8	5.6	5.2
Eggs	4.9	6.0	6.2
Apples	7.3	6.4	10.4
Lemons	4.5	17.8	9.2
Oranges	5.6	18.1	8.1
Beans, green	15.2	22.9	13.6
Cabbage	12.4	34.0	9.8
Carrots	6.2	18.5	7.1
Lettuce	13.5	27.7	10.7
Onions	9.1	22.8	10.7
Potatoes	6.8	11.4	7.8
Sweetpotatoes	7.3	10.5	8.5
Tomatoes [4]	17.9	33.4	17.4

[1] Average price received by farmers for quantity of farm product equivalent to retail unit (adjusted for value of nonfood byproducts).

[2] 1951–56.

[3] 1949–56.

[4] 1950–56.

The greater short-run variability in spreads is related to several factors. Lags in price adjustment are associated with the frequent price changes at wholesale, farm, and other market levels for many of the products in table 3. These lags lead to alternate widenings and narrowings in farm-retail spreads. The wide daily, weekly, and monthly fluctuations in marketings, characteristic of many farm products, cause price uncertainties and price risks for marketing agencies. These firms generally do not aim or expect to equate costs (including normal profits) on each transaction but to average out over a period of time. The same principle applies to firms handling many products. They aim at averaging out margins for several products rather than equating actual handling costs on each commodity. In fact, it would be difficult for most firms to allocate costs to the different products handled.

A part of the month-to-month movements in farm-retail spreads can be attributed to more or less regular, recurring seasonal variations in the marketing and prices of farm food products. The average seasonal movement of margins for some of the meat products and fruits and vegetables is fairly large—often greater than the seasonal movement of retail prices. If the timing and direction of the seasonal movements of farm and retail prices and margins coincide, then the seasonal variation in margins would tend to lessen the seasonal fluctuation in farm prices. This coincidence of seasonal movements characterizes many of the fresh fruits and vegetables. But for beef and especially pork, seasonal highs in the margin tend to come at times when marketings are high, which accentuates the seasonal fluctuations in farm prices.

Summary

No single or direct answer, uncomplicated by restrictive assumptions, can be given to the question of the relation of marketing and marketing costs to the level and stability of farm prices. In some ways marketing can be said to stabilize prices of farm products but it also may add to the instability of farm prices. Increases in marketing costs tend to lower farm prices, but under certain conditions these higher costs may tend to raise farm prices if they also raise consumer buying power. The demand-and-supply characteristics of each product, the causes of changes in marketing costs, the relation of these cost changes to other parts of the economy, and the length of the time period all may be significant in determining how a change in marketing costs affects the level and stability of farm prices.

Marketing and marketing costs are not, however, the primary cause of either instable or low-farm prices. The stability of agricultural production as a whole plus the inherent instability of production of many individual farm products overshadow marketing as a causal factor of instable farm prices. (These adjustment problems and possible solutions to them are the subject of other panels in this series.) But marketing should not be overlooked because of this. An efficient

marketing system does and can contribute greatly toward stabilizing and improving farm income. The efficiency of this marketing system, however, is not measured by the share of the consumer's dollar which it takes, nor do these percentage shares measure the net returns of either farmers or marketing firms. It is reasonable to expect that as the marketing system performs more and more services relative to agriculture that a larger share will go to marketing.